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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/983,048	10/15/2001	Gregory H. Ames	78333	8185

7590

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EXAMINER

KIM, ELLEN E

ART UNIT

PAPER NUMBER

2874

DATE MAILED: 04/15/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/983,048

Applicant(s)

AMES ET AL.

Examiner

Ellen E Kim

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-34 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: **ELLEN E. KIM**

PRIMARY EXAMINER

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DETAILED ACTION

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 25-33 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Note that the limitation claimed in claims 25-33 are repeating what already has been claimed.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-4, 10, 16, 18, 20, 24, and 25 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Bucholtz [USPAT 6,471,710].

Bucholtz discloses probe position sensing system comprising curvature sensors 42a, 42b, 42c [fig. 2], a bend member 47 [fig. 3], optical fibers 50, and detection device 54 [fig. 4].

In re claim 10, element 41 itself functions as a coupling means.

Claims 1-33 are further rejected under 35 U.S.C. 102(e) as being clearly anticipated by Hay et al [USPAT 6,278,811].

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Hay et al disclose fiber optic Bragg grating pressure sensor comprising a bend member 12 [fig. 4], optical fiber 28, 30, and detection device 35.

Hay et al teach the optical fiber Bragg grating laser [abstract].

Hay et al show the pair of rigid pieces, and a mount assembly [fig. 4].

Hay et al show the serpentine configuration in fig. 8.

Claim Rejections - 35 USC § 103

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 5-9, 17, 19, 22, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bucholtz in view of Hay et al [USPAT 6,278,811].

In re claims 5, 8 and 17, Bucholtz discloses every aspect of claimed invention except for at least one detection device having more than one optical fiber Bragg grating or fiber Bragg grating laser embedded in each of said optical fibers.

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Hay et al disclose fiber optic Bragg grating pressure sensor having at least one detection device having more than one optical fiber Bragg grating or fiber Bragg grating laser embedded in each of said optical fibers [abstract].

It would have been obvious to the ordinary skilled person in the art at the time the invention was made to modify Bucholtz's device to have at least one detection device having more than one optical fiber Bragg grating or fiber Bragg grating laser embedded in each of said optical fibers for the purpose of detecting physical properties at different locations without having extra separate detection device or optical fiber. Note that Fig. 8 shows the serpentine configuration.

In re claims 7, 8, 19 and 23, Bucholtz discloses every aspect of claimed invention except for the optical fiber Bragg grating laser.

Hay et al disclose fiber optic Bragg grating pressure sensor having the optical fiber Bragg grating laser [abstract].

It would have been obvious to the ordinary skilled person in the art at the time the invention was made to modify Bucholtz's device to have the optical fiber Bragg grating laser for the purpose of variable lasing wavelength.

Claims 11-15, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bucholtz in view of Hay et al [USPAT 6,278,811].

Bucholtz discloses every aspect of claimed invention except for the pair of rigid pieces, and a mount assembly.

Hay et al disclose fiber optic Bragg grating pressure sensor having the pair of rigid pieces, and a mount assembly [fig. 4].

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It would have been obvious to the ordinary skilled person in the art at the time the invention was made to modify Bucholtz's device to have the pair of rigid pieces, and a mount assembly for the purpose of hermetical sealing of the optical fiber sensor and the housing.

Claim 34 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bucholtz in view of Danisch [USPAT 6,127,672].

Bucholtz discloses every aspect of claimed invention except for the roll sensor.

Danisch teaches at column 11 lines 8-23 that combination of plurality of sensors.

Therefore, It would have been obvious to the ordinary skilled person in the art at the time the invention was made to modify Bucholtz's device to include the roll sensor for the purpose of accurate information of the property change in the device.

Claim 34 is further rejected under 35 U.S.C. 103(a) as being unpatentable over Hay et al in view of Danisch [USPAT 6,127,672].

Hay et al disclose every aspect of claimed invention except for the roll sensor.

Danisch teaches at column 11 lines 8-23 that combination of plurality of sensors.

Therefore, It would have been obvious to the ordinary skilled person in the art at the time the invention was made to modify Hay et al device to include the roll sensor for the purpose of accurate information of the property change in the device.

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Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Further references of interest are cited on Form PLO-892, which is attachment to this office action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ellen Kim whose telephone number is (703) 308-4946. The examiner can normally be reached on Monday and Thursday.

Ellen E. Kim
Primary Examiner
April 8, 2003/EK

